

OIB - Other: Airtec BT-67 12/16/17 - 12/17/17 Science Report

Aircraft: Other: Airtec BT-67 - 18M008

Date: Saturday, December 16, 2017 - Sunday, December 17, 2017

Mission: OIB

Mission Location: David B

Mission Summary:

Mission: David B (plus David A mop-up)

Priority: Low (mop-up medium)

This mission is designed to refly ICECAP flightlines over the David Glacier and Drygalski Ice Tongue, which were adversely affected by instrumentation problems in those earlier flights. flowline down the Reeves Glacier.

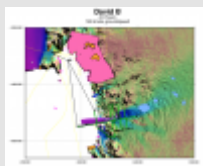
We transited the southwestern Ross Sea, crossed perpendicular to the Drygalski Ice Tongue and started up the Reeves Glacier flowline just north of David Glacier. Our pilots spotted blowing snow shortly before moderate turbulence hit us, and we had to clear the line and gain altitude several times before the winds smoothed out higher up past the steep drops into the lower glacier. We lost altimetry over about a third of that flowline due to the altitude gain. We then began and completed all six cross-glacier fluxgates that are part of the David A and B missions, repeatedly grazing David Glacier's spectacular icefall over undoubtedly dramatic bed topography (aka, David's Cauldron). We were previously unable to collect David A's two cross-glacier lines due to clouds. We then opted to descend along David A's centerline, rather than David B's, because the former was previously only partially complete (also clouds) and was oriented closer to the centerline of the glacier. Because of the potential for ice fog at Williams Field, we did not opt to refly the Reeves Glacier centerline or the David B centerline. All instruments reported good data collection, except for the portions of Reeves that the laser missed. We operated the radar in narrowband mode (180-210 MHz) all day to ensure thickness measurements in relatively rough terrain.

Attached images:

1. Map of today's mission (John Sonntag / NASA)
2. The edge of David's Cauldron. (Chris Larsen / UAF)
3. The serrated teeth of the margin of the Drygalski Ice Tongue (Chris Larsen / UAF)

Images:

Map of today's mission



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The edge of David's Cauldron



[Read more](#)

The serrated teeth of the margin of the Drygalski Ice Tongue



[Read more](#)

Submitted by: Joseph MacGregor on 12/17/17

Related Flight Report:

Other: Airtec BT-67 12/16/17 - 12/17/17

Flight Number: OIB-Basler Science Flight #15

Payload Configuration: OIB Basler Antarctica 17

Nav Data Collected: Yes

Total Flight Time: 5.8 hours

Submitted by: Joseph MacGregor on 12/17/17

Flight Segments:

From:	NZWD	To:	NZWD
Start:	12/16/17 21:22 Z	Finish:	12/17/17 03:12 Z
Flight Time:	5.8 hours		
Log Number:	18M008	PI:	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	<p>Mission: David B (plus David A mop-up) Priority: Low (mop-up medium) This mission is designed to refly ICECAP flightlines over the David Glacier and Drygalski Ice Tongue, which were adversely affected by instrumentation problems in those earlier flights. flowline down the Reeves Glacier. We transited the southwestern Ross Sea, crossed perpendicular to the Drygalski Ice Tongue and started up the Reeves Glacier flowline just north of David Glacier. Our pilots spotted blowing snow shortly before moderate turbulence hit us, and we had to clear the line and gain altitude several times before the winds smoothed out higher up past the steep drops into the lower glacier. We lost altimetry over about a third of that flowline due to the altitude gain. We then began and completed all six cross-glacier fluxgates that are part of the David A and B missions, repeatedly grazing David Glacier's spectacular icefall over undoubtedly dramatic bed topography (aka, David's Cauldron). We were previously unable to collect David A's two cross-glacier lines due to clouds. We then opted to descend along David A's centerline, rather than David B's, because the former was previously only partially complete (also clouds) and was oriented closer to the centerline of the glacier. Because of the potential for ice fog at Williams Field, we did not opt to refly the Reeves Glacier centerline or the David B centerline. All instruments reported good data collection, except for the portions of Reeves that the laser missed. We operated the radar in narrowband mode (180-210 MHz) all day to ensure thickness measurements in relatively rough terrain.</p>		

Flight Hour Summary:

						18M008
Flight Hours Approved in SOFRS						180
Total Used						217
Total Remaining						-37
18M008 Flight Reports						
Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
11/11/17 - 11/12/17	OIB-Transit leg #1b	Transit	6.3	6.3	173.7	

11/12/17	OIB-Transit leg #2	Transit	4.6	10.9	169.1	
11/12/17 - 11/13/17	OIB-Transit leg #2	Transit	6.2	17.1	162.9	
11/13/17	OIB-Transit leg #4	Transit	7	24.1	155.9	
11/13/17	OIB-Transit leg #4	Transit	3.4	27.5	152.5	
11/13/17	OIB-Transit leg #4	Transit	7	34.5	145.5	
11/16/17	OIB-Transit leg #4	Transit	4.8	39.3	140.7	
11/17/17	OIB-Transit leg #5	Transit	7.6	46.9	133.1	
11/17/17 - 11/18/17	OIB-Transit leg #5	Transit	4.2	51.1	128.9	
11/21/17	Ski test flight	Check	1.8	52.9	127.1	
11/26/17 - 11/27/17	OIB-Basler Test Flight	Check	2.9	55.8	124.2	
11/27/17	OIB-Basler Mx Flight	Maintenance	0.8	56.6	123.4	
11/27/17	Chips Lt L/H engine	Check	0.3	56.9	123.1	
11/28/17 - 11/29/17	OIB-Basler Science Flight #1	Science	6.3	63.2	116.8	
11/30/17 - 12/01/17	OIB-Basler Science Flight #2	Science	7.5	70.7	109.3	
12/01/17 - 12/02/17	OIB-Basler Science Flight #3	Science	8	78.7	101.3	
12/02/17	OIB-Basler Science Flight #4	Science	6.3	85	95	
12/02/17 - 12/03/17	OIB-Basler Science Flight #5	Science	6.5	91.5	88.5	
12/03/17 - 12/04/17	OIB-Basler Science Flight #6	Science	8.2	99.7	80.3	
12/04/17	OIB-Basler Science Flight #7	Science	5.9	105.6	74.4	
12/04/17	Ferguson training flight #1	Pilot Proficiency	0.3	105.9	74.1	
12/04/17 - 12/05/17	OIB-Basler Science Flight #8	Science	4.5	110.4	69.6	0
12/06/17 - 12/07/17	OIB-Basler Science Flight #9	Science	5.9	116.3	63.7	
12/08/17	MX test flight - oil pressure flux	Maintenance	0.8	117.1	62.9	
12/13/17 - 12/14/17	OIB-Basler Science Flight #10	Science	4.3	121.4	58.6	

12/14/17	OIB-Basler Science Flight #11	Science	7.4	128.8	51.2
12/14/17 - 12/15/17	OIB-Basler Science Flight #12	Science	6.7	135.5	44.5
12/15/17	OIB-Basler Science Flight #13	Science	3.4	138.9	41.1
12/15/17 - 12/16/17	OIB-Basler Science Flight #14	Science	7.2	146.1	33.9
12/16/17 - 12/17/17	OIB-Basler Science Flight #15	Science	5.8	151.9	28.1
12/17/17 - 12/18/17	OIB-Basler Science Flight #16	Science	6	157.9	22.1
12/26/17	OIB-Basler Transit North 1	Transit	4.7	162.6	17.4
12/26/17	OIB-Basler Transit North 2	Transit	8	170.6	9.4
12/27/17	OIB-Basler Transit North 3	Transit	5.4	176	4
12/28/17	OIB-Basler Transit North 4	Transit	4.7	180.7	-0.7
12/28/17 - 12/29/17	OIB-Basler Transit North 5	Transit	7.2	187.9	-7.9
12/28/17 - 12/29/17	OIB-Basler Transit North 6	Transit	7.2	195.1	-15.1
12/29/17	OIB-Basler Transit North 7	Transit	6.3	201.4	-21.4
12/30/17	OIB-Basler Transit North 8	Transit	3.9	205.3	-25.3
12/30/17 - 12/31/17	OIB-Basler Transit North 9	Transit	6.9	212.2	-32.2
12/31/17	OIB-Basler Transit North 10	Transit	4.8	217	-37

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

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